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EXHIBIT 4

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ACACIA MEDIA TECHNOLOGIES CORPORATION

UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

In re ACACIA MEDIA TECHNOLOGIES CORPORATION	Case No. 05 CV 01114 JW [Specific Case No. 04-CV-02308 JW] **PLAINTIFF ACACIA MEDIA TECHNOLOGIES CORPORATION'S DISCLOSURE OF ASSERTED CLAIMS AND PRELIMINARY INFRINGEMENT CONTENTIONS RE '992 AND '702 PATENTS TO THE DIRECTV GROUP, INC.** [Patent Local Rule 3-1]

Pursuant to Patent L.R. 3-1, Plaintiff Acacia Media Technologies Corporation ("Acacia") hereby submits the following Disclosure of Asserted Claims and Preliminary Infringement Contentions re '992 and '702 patents with respect to Defendant The DIRECTV Group, Inc. ("DIRECTV").

In making these disclosures and preliminary infringement contentions, Acacia has not yet received any discovery from DIRECTV regarding its methods and systems and the Court has not issued a claim construction ruling. Accordingly, Acacia reserves the right to amend its disclosures and preliminary infringement contentions, including the identity of the claims being asserted, upon receiving discovery from DIRECTV, receiving the Court's claim construction ruling, and/or receiving any other relevant information.

I. IDENTITY OF EACH CLAIM INFRINGED BY DIRECTV (PATENT L.R. 3-1(A))

Acacia alleges that DIRECTV has infringed and is infringing the following claims of the following patents:

Patent	Claims Alleged Infringed
U.S. Patent No. 5,132,992 ('992 patent)	41-45
U.S. Patent No. 6,144,702 ('702 patent)	1-8, 11-19, and 22, 23, 26-34, and 37-42.

II. IDENTITY OF DIRECTV'S ACCUSED INSTRUMENTALITIES (PATENT L.R. 3-1(B))

Acacia believes that DIRECTV provides the following systems and services to its subscribers:

1. Direct to home satellite television and music. ("Digital Satellite Television");
2. Pay-per-view movies to subscribers ("Pay-Per-View");
3. Digital ad insertion.

Each of the systems and services provided by DIRECTV have multiple varieties. The following table shows in greater detail each of the Accused Instrumentalities within each category of DIRECTV's systems and services:

DIRECTV System/Service	Identification of Known Methods Which Are Believed to be Accused Instrumentalities	Identification of Accused Apparatus Which Are Believed to Be Part of the Accused Instrumentalities
1. Digital Satellite Television	**Accused Instrumentality No. 1(a) (digital transmission of prerecorded source material which is not stored at an uplink facility, but without the use of a DVR by the subscriber)** – DIRECTV receives digital, compressed content at its uplink facility from a source such as, for example, HBO or STARZ. The content originated from pre-recorded source material (e.g., in a source material library) which was stored on a server in its compressed digital format (e.g., MPEG-2) before being received by DIRECTV. DIRECTV, without storing the content at its uplink facility, sends the content in a compressed, digital format (e.g., MPEG-2) to subscribers having a set top box without a DVR. All of DIRECTV's subscription services utilize Accused Instrumentality No. 1(a), except with respect to those users who use only set top boxes with DVRs, and except that each subscriber may select different programming packages and they are charged accordingly. Examples of such subscription services are TOTAL CHOICE, TOTAL CHOICE PLUS, TOTAL CHOICE PREMIER, TOTAL CHOICE PACKAGES, HBO, STARZ Super Pak, SHOWTIME UNLIMITED, Cinemax, SPORTS Pack, NFL SUNDAY TICKET, NBA LEAGUE PASS, MLB EXTRA INNINGS, NHL CENTER ICE, MLS DIRECT KICK, English Premier League, ESPN GamePlan, ESPN FULL COURT, AE 5 Channel Offer, A Taste of Spice, Playboy TV, SPICE PLATINUM, The Hot Network, The Hot Zone, SPICE HD, DIRECTV Para Todos, DIRECTV for Business, and DIRECTV International Services. **Accused Instrumentality No. 1(b) (digital transmission of prerecorded source material which is not stored at an uplink facility and with the use of a DVR by the subscriber)** – DIRECTV receives digital, compressed content at its uplink facility from a source such as, for example, HBO or STARZ. The content originated from pre-recorded source material (e.g., in a source material library) which was stored on a server in its compressed digital format (e.g.,	DIRECTV's Digital Satellite Television is believed to operate using receiving and transmitting equipment at the DIRECTV uplink facility. Digital television signals are transmitted to each subscriber's home using the uplink and geosynchronous satellites. Digital television signals are received at each subscriber's home using a satellite dish and set top box provided to the user by DIRECTV or purchased by the user. If manufactured by someone other than DIRECTV, the set top box complies with DIRECTV's specifications. Known set top boxes provided by DirecTV to its Digital Satellite Television subscribers are indicated on DIRECTV's website at http://www.directv.com/DTVAPP/learn/Manuals.dsp. Subscribers may use a DVR for digitally storing a complete copy of received video programs. Such DVR may be purchased from DIRECTV or they are also available for purchase from other sources. A sample list of DVR may be seen at http://www.directv.com/DTVAPP/learn/Manuals.dsp.

DIRECTV System/Service	Identification of Known Methods Which Are Believed to be Accused Instrumentalities	Identification of Accused Apparatus Which Are Believed to Be Part of the Accused Instrumentalities
	MPEG-2) before being received by DIRECTV. DIRECTV, without storing the content at its uplink facility, sends the content in a compressed, digital format (e.g., MPEG-2) to subscribers having a set top box with a DVR. All of DIRECTV's subscription services utilize Accused Instrumentality No. 1(b), except with respect to users who do not use any set top boxes with a DVR and except that each subscriber may select different programming packages and they are charged accordingly. Examples of such subscription services are TOTAL CHOICE, TOTAL CHOICE PLUS, TOTAL CHOICE PREMIER, TOTAL CHOICE PACKAGES, HBO, STARZ Super Pak, SHOWTIME UNLIMITED, Cinemax, SPORTS Pack, NFL SUNDAY TICKET, NBA LEAGUE PASS, MLB EXTRA INNINGS, NHL CENTER ICE, MLS DIRECT KICK, English Premier League, ESPN GamePlan, ESPN FULL COURT, AE 5 Channel Offer, A Taste of Spice, Playboy TV, SPICE PLATINUM, The Hot Network, The Hot Zone, SPICE HD, DIRECTV Para Todos, DIRECTV for Business, and DIRECTV International Services. **Accused Instrumentality No. 1(c) (digital transmission of live source material which is not stored at an uplink facility and with the use of a DVR by the subscriber)** – DIRECTV receives digital, compressed content at its uplink facility from a source such as, for example, HBO or STARZ. The content had been stored in a compressed digital format (e.g., MPEG-2) prior to being received by DIRECTV, but had not necessarily been stored in a source material library. DIRECTV, without storing the content at its uplink facility, sends the content in a compressed, digital format (e.g., MPEG-2) to subscribers having a set top box with a DVR. All of DIRECTV's subscription services utilize Accused Instrumentality No. 1(c), except with respect to users who do not use any set top boxes with a DVR and except that each subscriber may select different programming packages and they are charged accordingly. Examples of such subscription services are TOTAL CHOICE, TOTAL CHOICE PLUS, TOTAL CHOICE PREMIER, TOTAL CHOICE PACKAGES, HBO, STARZ Super Pak, SHOWTIME UNLIMITED, Cinemax, SPORTS Pack, NFL SUNDAY TICKET, NBA LEAGUE PASS, MLB EXTRA INNINGS, NHL CENTER ICE, MLS DIRECT	

DIRECTV System/Service	Identification of Known Methods Which Are Believed to be Accused Instrumentalities	Identification of Accused Apparatus Which Are Believed to Be Part of the Accused Instrumentalities
	KICK, English Premier League, ESPN GamePlan, ESPN FULL COURT, AE 5 Channel Offer, A Taste of Spice, Playboy TV, SPICE PLATINUM, The Hot Network, The Hot Zone, SPICE HD, DIRECTV Para Todos, DIRECTV for Business, and DIRECTV International Services.	
2. Pay-Per-View	**Accused Instrumentality No. 2(a) (digital transmission of prerecorded source material which is stored at an uplink facility but without the use of a DVR by the subscriber)** – DIRECTV receives digital, compressed content (e.g., MPEG-2) at its uplink facility from a source such as, for example, a content aggregator/content provider (e.g., HBO or STARZ). The content originated from pre-recorded source material (e.g., in a source material library) which was later stored on a server in a compressed digital format (e.g., MPEG-2) before being received by DIRECTV. DIRECTV stores the digital, compressed content at its uplink facility and DIRECTV sends the content in a compressed, digital format (e.g., MPEG-2) to subscribers having a set top box without a DVR. The service which DIRECTV refers to as Pay Per View is believed to utilize Accused Instrumentality No. 2(a). **Accused Instrumentality No. 2(b) (digital transmission of prerecorded source material, which is stored at an uplink facility and with the use of a DVR by the subscriber)** – DIRECTV receives digital, compressed content (e.g., MPEG-2) at its uplink facility from a source such as, for example, a content aggregator/content provider (e.g., HBO or STARZ). The content originated from pre-recorded source material (e.g., in a source material library) which was later stored on a server in a compressed digital format (e.g., MPEG-2) before being received by DIRECTV. DIRECTV stores the digital, compressed content at its uplink facility and DIRECTV sends the content in a compressed, digital format (e.g., MPEG-2) to subscribers having a set top box with a DVR. The service which DIRECTV refers to as Pay Per View is believed to utililize Accused Instrumentality No. 2(b). **Accused Instrumentality No. 2(c) (digital transmission of live source material which is stored at an uplink facility and with the use of a DVR by the subscriber)** – DIRECTV receives digital, compressed content (e.g., MPEG-2) at its	DIRECTV's Pay-Per-View is believed to operate using equipment at DIRECTV uplink facility, including receiving, storage, and transmitting equipment. Digital television signals are transmitted to each subscriber's home using the uplink and geosynchronous satellites. Digital television signals are received at each subscriber's home using a satellite dish and set top box provided to the user by DIRECTV or purchased by the user. If manufactured by someone other than DIRECTV, the set top box complies with DIRECTV's specifications. Known set top boxes provided by DirecTV to its Digital Satellite Television subscribers are indicated on DIRECTV's website at http://www.directv.com/DTVAPP/learn/Manuals.dsp Subscribers may use DVR for digitally storing a complete copy of received video programs. Such DVR may be purchased from DirecTV or they are also available for purchase from other sources. A sample list of DVR may be seen at http:www.directv.com/DTVAPP/learn/Manuals.dsp.

DIRECTV System/Service	Identification of Known Methods Which Are Believed to be Accused Instrumentalities	Identification of Accused Apparatus Which Are Believed to Be Part of the Accused Instrumentalities
	uplink facility from a source such as, for example, a content aggregator/content provider (e.g., HBO or STARZ). The content had been stored in a compressed digital format (e.g., MPEG-2) prior to being received by DIRECTV, but had not necessarily been stored in a source material library. DIRECTV stores the digital, compressed content at its uplink facility and DIRECTV sends the content in a compressed, digital format (e.g., MPEG-2) to subscribers having a set top box with a DVR. The service which DIRECTV refers to as Pay Per View is believed to utilize Accused Instrumentality No. 2(c).	
3. Digital Ad Insertion	**Accused Instrumentality No. 3(a) (digital transmission of prerecorded source material which is stored at an uplink facility, but without the use of a DVR by the subscriber)** – DIRECTV receives digital, compressed advertising content at its uplink facilities from a source such as, for example, an advertiser, an encoding company, or DIRECTV creates the encoded content itself. The content originated from pre-recorded source material (e.g., in a source material library) which was stored on a server in a compressed digital format (e.g., MPEG-2) before being received by DIRECTV. DIRECTV stores the content at its uplink facility and inserts the digital advertising into programming (both to subscribers and pay per view), which DIRECTV sends in a compressed, digital format to subscribers having a set top box without a DVR. **Accused Instrumentality No. 3(b) (digital transmission of prerecorded source material which is stored at an uplink facility and with the use of a DVR by the subscriber)** – DIRECTV receives digital, compressed advertising content at its uplink facilities from a source such as, for example, an advertiser, an encoding company, or DIRECTV creates the encoded content itself. The content originated from pre-recorded source material (e.g., in a source material library) which was stored on a server in a compressed digital format (e.g., MPEG-2) before being received by DIRECTV. DIRECTV stores the content at its uplink facility and inserts the digital advertising into programming (both to subscribers and pay per view), which DIRECTV sends in a compressed, digital format to subscribers having a set top box	DIRECTV's Digital Ad Insertion is believed to operate using receiving, storage, and transmitting equipment at DIRECTV uplink facilities. Digital television signals are transmitted to each subscriber's home using the uplink and geosynchronous satellites. Digital television signals are received at each subscriber's home using a satellite dish and set top box provided to the user by DIRECTV or purchased by the user. If manufactured by someone other than DIRECTV, the set top box complies with DIRECTV's specifications. Known set top boxes provided by DirecTV to its Digital Satellite Television subscribers are indicated on DIRECTV's website at http://www.directv.com/DTVAPP/learn/Manuals.dsp. Known hardware configuration for digital ad insertion may include the Harmonic MV-50 encoder, which is SCTE 35 compliant. Subscribers may use DVR for digitally storing a complete copy of received video programs. Such DVR may be purchased from DirecTV or they are also available for purchase from other sources. A

DIRECTV System/Service	Identification of Known Methods Which Are Believed to be Accused Instrumentalities	Identification of Accused Apparatus Which Are Believed to Be Part of the Accused Instrumentalities
	with a DVR.	sample list of DVR may be seen at http:www.directv.com/DTVAPP/learn/Manuals.dsp.

Acacia believes that the following claims of each of the patents-in-suit are being infringed by each of the Accused Instrumentalities as shown below:

Accused Instrumentality	Patent Claims Alleged to Be Infringed by Each Accused Instrumentality
Accused Instrumentality No. 1(a)	'992 patent, Claims 41-45. '702 patent, Claims 14 and 41.
Accused Instrumentality No. 1(b)	'992 patent, Claims 41-45. '702 patent, Claims 1-8, 11-19, and 22, 23, 26-34, and 37-42.
Accused Instrumentality No. 1(c)	'702 patent, Claims 1, 5-8, 11-16, 27, 31-34, and 37-42.
Accused Instrumentality No. 2(a)	'992 patent, Claims 41-45. '702 patent, Claims 14 and 41.
Accused Instrumentality No. 2(b)	'992 patent, Claims 41-45. '702 patent, Claims 1-8, 11-19, and 22, 23, 26-34, and 37-42.
Accused Instrumentality No. 2(c)	'702 patent, 1, 5-8, 11-16, 27, 31-34, and 37-42.
Accused Instrumentality No. 3(a)	'992 patent, Claims 41-45. '702 patent, Claims 14 and 41.
Accused Instrumentality No. 3(b)	'992 patent, Claims 41-45.

Accused Instrumentality	Patent Claims Alleged to Be Infringed by Each Accused Instrumentality
	'702 patent, Claims 1-8, 11-19, and 22, 23, 26-34, and 37-42.

III. CHART IDENTIFYING WHERE EACH ELEMENT OF EACH ASSERTED CLAIM IS FOUND WITHIN EACH ACCUSED INSTRUMENTALITY (PATENT L.R. 3-1(C))

The following chart identifies where each element of each asserted claim is found within each of DIRECTV's Accused Instrumentality:

A. '992 Patent

'992 Patent Claim	DIRECTV's Accused Instrumentality
41. A method of transmitting information to remote locations, the transmission method comprising the steps, performed by a transmission system, of:	Acacia accuses DIRECTV of infringing claim 41 of the '992 patent with its instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b). In each of these instrumentalities, DIRECTV receives digital video information from a content provider/content aggregator, such as HBO or STARZ, who is acting on DIRECTV's behalf. In instrumentality nos. 2(a) and 2(b), and sometimes 3(a) and 3(b), DIRECTV receives this video and/or audio information and stores it on its own video server, a compressed data library, before it transmits the information to its subscribers, who are at locations remote from the transmission system. In instrumentality nos. 1(a) and 1(b), and sometimes 3(a) and 3(b), DIRECTV transmits the digital video and/or audio information to its subscribers, who are at locations remote from the transmission system, without storing the information at DIRECTV's uplink facilities. The content provider/content aggregator's system(s) and/or DIRECTV's uplink facilities(s) comprise a transmission system.
storing items having information in a source material library;	In instrumentality nos. nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), items having information are stored in a source material library maintained either by DIRECTV or by one or more of DIRECTV's content providers/content aggregators. Source material is stored as a collection of items. As each item is obtained, it is added to the collection of items. Each item is in at least one format, including, but not limited to, film, digital tape, analog or digital videotape, CD, DVD, or hard disk.
retrieving the information in the items from the source material library;	In instrumentality nos. nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), the information in the items is retrieved from the source material library.

'992 Patent Claim	DIRECTV's Accused Instrumentality
	Source video and/or audio material is stored as a collection of items. Each item is in at least one format, including, but not limited to, film, digital tape, analog or digital videotape, CD, DVD, or hard disk. The information for each item, before being processed to be sent to a remote location, must be retrieved from the item so that the information in the item can be processed to be sent to the user at the remote location in its proper format.
assigning a unique identification code to the retrieved information;	In instrumentality nos. nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), a unique identification code is assigned to the retrieved information. Items of digital video and/or audio information are assigned a unique identification code by software. The unique identification code may be used to identify and locate the item of information within the compressed data library. Prerecorded video information is stored by the content provider/content aggregator or DIRECTV on servers prior to transmission.
placing the retrieved information into a predetermined format as formatted data;	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), and 3(b), the retrieved information is placed into a predetermined format as formatted data by conversion or formatting, using software, into a specific predetermined format for video, such as "Y, Cr, Cb".
placing the formatted data into a sequence of addressable data blocks;	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), and 3(b), the formatted data is placed into a sequence of addressable data blocks using a time encoder. MPEG-2 encoders utilize a time encoder and Acacia believes that DIRECTV utilizes the MPEG-2 format or an equivalent. For example, in the ISO/IEC 13818-1:2000(E) (MPEG System Specification) at page 116, "There is a single, common system clock in the MPEG-2 encoder, and this clock is used to create timestamps that indicate the correct presentation and decoding timing of audio and video, as well as to create timestamps that indicate the instantaneous values of the system clock itself at sampled intervals. The timestamps that indicate the presentation time of audio and video are called Presentation Time Stamps (PTS). Those that indicate the decoding time are called Decoding Timestamps (DTS), and those that indicate the value of the system clock are called the System Clock Reference (SCR) in Program Streams and the Program Clock Reference (PCR) in Transport Streams. It is the presence of this common system clock in the encoder, the timestamps that are created from it, and the recreation of the clock in the decoder and the correct use of the timestamps that provide the facility to synchronize properly the operation of the decoder." Further, the MPEG-2 (ISO/IEC 13818-1:1996(E)) video systems specification indicates on page 49 that the formatted data is formed into data blocks such that a Group of Pictures (GOP) header is created. This header also contains a timestamp. Data blocks having the assigned timestamps are in a sequence of addressable data blocks. The same standards as described above for MPEG-2 are understood by Acacia to apply to MPEG-4 as well.

'992 Patent Claim	DIRECTV's Accused Instrumentality
	The presence of these timestamps indicates that the formatted data was placed into a sequence of addressable data blocks (e.g., time encoded).
compressing the formatted and sequenced data blocks;	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), the formatted and sequenced data blocks are compressed. MPEG-2 encoders compress digital video and/or audio data blocks that have associated time stamps. (See, MPEG-2 specification).
storing, as a file, the compressed, formatted, and sequenced data blocks with the assigned unique identification code; and	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), the compressed, formatted, and sequenced data blocks are stored as a file with the assigned unique identification code. Following MPEG-2 compression, the compressed video and/or audio information for an item is stored as a file. For instance, it is known that at least some of DIRECTV's content providers, such as STARZ, use Pinnacle Systems video servers to store audiovisual items prior to transmission. (See, "STARZ Encore Productivity and Air Operation," broadcastengineering.com and "STARZ Encore Group," broadcastengineering.com). Further, DIRECTV states on its website that: "Some programs are copied to professional video servers by the broadcast centers' state-of-the-art automation equipment to be broadcast later." (http://www.directv.com/DTVAPP/learn/DTVTechnology.jsp). It is known that DIRECTV utilizes MediaStream 1600 servers at its uplink facilities (skyreport.com, 4/20/99). The video servers used by DIRECTV store audiovisual items in the form of files, each file being accompanied by its unique identification code. Before creating the file, however, the compressed data must be formatted in the particular file format. In instrumentalities 1(a), 1(b), and sometimes 3(a) and 3(b), the video server for storing compressed, digital video information resides at the content provider/content aggregator such as HBO or STARZ. In instrumentality nos. 2(a), 2(b), 3(a) and 3(b), DIRECTV uplink facilities additionally use video servers to store items of digital audio and/or video information accompanied by assigned unique identification codes.
sending at least a portion of the file to one of the remote locations.	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), DIRECTV sends a file (or a portion of a file) from its uplink facilities(s) to at least one of its subscribers, at a location remote from the transmission system.
42. A transmission method as recited in claim 41, wherein the step of placing further includes the steps of: A/D converting analog signals of the retrieved information into a series of digital data bytes; and converting the series of digital data bytes into formatted data with a predetermined format.	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), if the source material is in an analog format, the analog signals of the source material are analog-digital (A/D) converted into a series of digital data bytes and converted, using software, into a specific predetermined format for video, such as "Y, Cr, Cb".

'992 Patent Claim	DIRECTV's Accused Instrumentality
43. A transmission method as recited in claim 41, wherein the step of placing further includes the steps of: converting digital signals of the retrieved information into predetermined voltage levels; and converting the predetermined voltage levels into formatted data with a predetermined format.	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), if the source material is in a digital format, the digital signal is converted to predetermined voltage levels and then converted into a predetermined format. Video and/or audio information of the source material item is retrieved as a digital signal from the item. These digital signals of the retrieved information are then converted into a signal representing the information which was stored on the storage medium, having a format such as SMPTE 259M. Digital signals in the SMPTE 259M format have predetermined voltage levels. These signals are converted, using software, into a specific predetermined format for video, such as "Y, Cr, Cb."
44. A transmission method as recited in claim 41, wherein the step of placing further includes the step of converting digital signals of the retrieved information into formatted data with a predetermined format.	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), if the source material is in a digital format, the digital signal is converted, using software, into a specific predetermined format for video, such as "Y, Cr, Cb".
45. A transmission method as recited in claim 41, wherein the storing step further comprises the step of: separately storing a plurality of files, each including compressed, sequenced data blocks.	In instrumentality nos. 1(a), 1(b), 2(a), 2(b), 3(a), and 3(b), a plurality of files are separately stored on the server, each having compressed, sequenced data blocks. Following compression, the compressed video and/or audio information (e.g., compressed, sequenced data blocks) for an item is stored as a file on a video server. The compressed video information for other items is also separately stored as files on the video server. It is known that at least some of DIRECTV's content providers, such as STARZ, use Pinnacle Systems video servers to store audiovisual items prior to transmission. (See, "STARZ Encore Productivity and Air Operation," broadcastengineering.com and "STARZ Encore Group," broadcastengineering.com). Further, DIRECTV states on its website that: "Some programs are copied to professional video servers by the broadcast centers' state-of-the-art automation equipment to be broadcast later." (http://www.directv.com/DTVAPP/learn/DTVTechnology.jsp). It is known that DIRECTV utilizes MediaStream 1600 servers at its uplink facilities (skyreport.com, 4/20/99).

B. '702 Patent

'702 Patent Claim	DIRECTV's Accused Instrumentality
1. A communication system comprising: a transmission system at a first location in data communication with a reception system at a second location, wherein said transmission system comprises	Acacia accuses DIRECTV of infringing claim 1 of the '702 patent with its instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b). In each of these instrumentalities, DIRECTV receives digital video and/or audio information from a content provider/content aggregator, such as HBO or STARZ, who is acting on DIRECTV's behalf. In instrumentality 2(b), 2(c) and sometimes 3(b), DIRECTV receives this video and/or audio information and stores it on its own video server, a

'702 Patent Claim	DIRECTV's Accused Instrumentality
	compressed data library. In instrumentality 1(b) and 1(c) the digital video and/or audio information is transmitted to its subscribers without having been stored at DIRECTV's uplink facilities. The content provider/content aggregator's system(s) and/or DIRECTV's uplink facilities(s) comprise a transmission system. The digital video and/or audio information is transmitted to the homes of DIRECTV subscribers who have set top boxes provided to them by DIRECTV. Each set top box is a reception system at a second location (e.g. at a location that is different than the location(s) of the transmission system). Video information is transferred from the transmission system to the reception system and therefore when the data is being transferred between the transmission system and the reception system, they are in data communication.
a sequence encoder,	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a sequence encoder exists. MPEG-2 encoders utilize a time encoder and Acacia believes that DIRECTV utilizes the MPEG-2 format. For example, in the ISO/IEC 13818-1:2000(E) (MPEG System Specification) at page 116, "There is a single, common system clock in the MPEG-2 encoder, and this clock is used to create timestamps that indicate the correct presentation and decoding timing of audio and video, as well as to create timestamps that indicate the instantaneous values of the system clock itself at sampled intervals. The timestamps that indicate the presentation time of audio and video are called Presentation Time Stamps (PTS). Those that indicate the decoding time are called Decoding Timestamps (DTS), and those that indicate the value of the system clock are called the System Clock Reference (SCR) in Program Streams and the Program Clock Reference (PCR) in Transport Streams. It is the presence of this common system clock in the encoder, the timestamps that are created from it, and the recreation of the clock in the decoder and the correct use of the timestamps that provide the facility to synchronize properly the operation of the decoder." Further, the MPEG-2 (ISO/IEC 13818-1:1996(E)) video systems specification indicates on page 49 that the formatted data is formed into data blocks such that a Group of Pictures (GOP) header is created. This header also contains a timestamp. Data blocks having the assigned timestamps are in a sequence of addressable data blocks. The same standards as described above for MPEG-2 are understood by Acacia to apply to MPEG-4 as well. The presence of these timestamps indicates that a sequence encoder must have been used during MPEG-2 encoding within the MPEG-2 encoder to assign the timestamps to the data blocks and thereby create a sequence of addressable data blocks.

'702 Patent Claim	DIRECTV's Accused Instrumentality
an identification encoder, and	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), an identification encoder exists. Items of digital video and/or audio information stored in the compressed data library (see below) are assigned a unique identification code. A structure, such as software, assigns the unique identification code. The unique identification code may be used to identify and locate the item of information within the compressed data library.
a compressed data library in data communication with said identification encoder, wherein said identification encoder gives items in said compressed data library a unique identification code; and	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a compressed data library in data communication with the identification encoder exists. In instrumentalities 1(b), 1(c), 2(b), 2(c), and 3(b), a video server for storing compressed, digital video information resides at the content provider/content aggregator such as HBO or STARZ. (See, "STARZ Encore Productivity and Air Operation," broadcastengineering.com and "STARZ Encore Group," broadcastengineering.com). The video and/or audio items stored on the video server are accompanied by the unique identification code assigned to each by the identification encoder, and therefore the compressed data library must be in data communication with the identification encoder. In instrumentality nos. 2(b), 2(c) and 3(b), DIRECTV uplink facilities also may use video servers to store items of digital video information accompanied by assigned unique identification codes. DIRECTV states on its website that: "Some programs are copied to professional video servers by the broadcast centers' state-of-the-art automation equipment to be broadcast later." (http://www.directv.com/DTVAPP/learn/DTVTechnology.jsp). It is known that DIRECTV utilizes MediaStream 1600 servers at its uplink facilities (skyreport.com, 4/20/99).
wherein said reception system comprises a transceiver in data communication with said transmission system,	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a transceiver in data communication with a transmission system exists. DIRECTV provides its subscribers with set top boxes, some of which include a digital video recorder (DVR). The set top box receives video and/or audio information transmitted from the transmission system via a satellite television communication channel and is therefore in data communication with the transmission system. The set top box is also capable of transmitting, for example, pay per view (PPV) selections to the billing portion of the transmission system. Therefore, when the receiver of the set top box receives video from the transmission system or when the transmitter of the set top box sends PPV selections to the transmission system, data is being transferred between the set top box and the transmission system meaning that they are in data communication.
a storage device in data communication with said transceiver,	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a storage device in data communication with the transceiver exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a RAM and a hard disk used to store video and/or audio programs received from the transmission system. These storage devices receive the programs from the transceiver, and therefore when data is being

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	transferred between the transceiver and the storage device, they are in data communication.
user playback controls in data communication with said storage device,	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), user playback controls in data communication with the storage device exist. The set top boxes with DVR provided by DIRECTV to its subscribers allow the user to play back the stored video and/or audio using playback controls, such as stop, rewind, pause, and fast forward. The playback controls communicate information to the storage device either directly of through the decompressor and therefore when data is being transferred between the playback controls and the storage device, they are in data communication.
a digital [de]compressor in data communication with said storage device, and	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a digital decompressor in data communication with the storage device exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a decompressor which decompresses MPEG-2 information. The digital decompressor operates on the video and/or audio information it receives from the DVR hard disk and therefore when the data is being transferred between the digital decompressor and the hard disk, they are in data communication.
a playback device in data communication with said digital decompressor.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a playback device in data communication with the digital decompressor exists. The set top boxes with DVR provided by DIRECTV to its subscribers output video and/or audio information to a television set (playback device) for viewing. The television receives data from the decompressor and therefore when data is being transferred between the decompressor and the television, they are in data communication.
2. A communication system as recited in claim 1, wherein said transmission system further comprises: a source material library storing a portion of at least one data file.	In instrumentality nos. 1(b), 2(b), and 3(b) a source material library exists. Prerecorded source audio and/or video material is stored as a collection of data files (or portions of data files) prior to compression. Each video and/or audio item is stored on at least one exemplary storage medium, including, but not limited to, film, digital tape, analog or digital videotape, CD, DVD, or hard disk.
3. A communication system as recited in claim 2, wherein said transmission system further comprises: a converter having a data input in data communication with said source material library and a digital data output.	In instrumentality nos. 1(b), 2(b), and 3(b) a converter having a data input in data communication with the source material library and a digital data output exists. Video information is converted by the converter into a specific predetermined format for video, such as "Y, Cr, Cb." The converter has a data input wherein the video and/or audio information from the item which was stored in the source material library is passed from the source material library to the converter, and therefore when data is transferred between the source material library and the data input of the converter, they are in data communication. The converter has a digital data output for outputting the video information in the proper format.
4. A communication system as recited	In instrumentalities 1(b), 2(b), and 3(b) a digital data compressor in data

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in claim 3, wherein said transmission system further comprises: a data compressor in data communication with said digital data output of said converter.	communication with the digital data output exists. MPEG-2 encoders compress digital video and/or audio (See, MPEG-2 specification). The MPEG-2 encoder receives digital data from the digital data output of the converter which has been time encoded by the sequence encoder. When the data is transferred between the digital data output of the converter and the compressor, they are in data communication.
5. A communication system as recited in claim 1, wherein said transmission system further comprises: a compressed data formatting device in data communication with said identification encoder.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a compressed data formatting device in data communication with the identification encoder exists. Compressed data must be formatted in the particular file format by a compressed data formatting device running on hardware that formats the input data to the file format, such as MPEG-2 or other format. Audio and video data are compressed separately. Accordingly, following compression, the compressed audio and video data are combined into a single file. The software and hardware that performs the combination of the audio and video is the compressed data formatting device. The compressed data formatting device creates and formats the file having an accompanying unique identification code assigned by the identification encoder, and therefore when the unique identification code is being transferred between the identification encoder and the compressed data formatting device, they are in data communication.
6. A communication system as recited in claim 1, wherein said identification encoder allows entry of a popularity code.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), the identification encoder allows entry of a popularity code. In a pay-per-view system or a digital ad insertion system, the identification encoder also allows the entry of a popularity code. This popularity code relates to the anticipated or actual number of requests for any particular video and/or audio item stored on the video server. Using the popularity code the server may, for instance, allocate appropriate resources for the popularity of each item.
7. A communication system as recited in claim 1, wherein said sequence encoder transforms digital data blocks into a group of addressable data blocks.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a sequence encoder which transforms digital data blocks into a group of addressable data blocks exists. See, discussion regarding "sequence encoder" above. The time encode included with the MPEG-2 encoder, described above, transforms digital data blocks into a group of addressable data blocks.
8. A communication system as recited in claim 1, wherein said transmission system further comprises: a transmitter in data communication with said compressed data library, wherein said transmitter sends at least a portion of a compressed data file to said reception system.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a transmitter in data communication with the compressed data library exists. DIRECTV transmits the compressed video and/or audio data file (or a portion of the file) to the subscribers' reception system from uplink facilities(s) via a satellite television communications channel. This transmitter receives its information from the compressed data library and therefore when the data is being transferred between the transmitter and the compressed data library, they are in data communication.

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11. A communication system as recited in claim 1, wherein said reception system further comprises: a receiver format converter in data communication with said transceiver, wherein said receiver format converter converts at least a portion of a data file into a format suitable for playback by a user.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a receiver format converter in data communication with the transceiver exists. In order to transmit a digital video and/or audio signal to a subscriber set top box, the digital video and/or audio signal must be modulated (e.g., QPSK, QAM,8-VSB, etc.). DIRECTV transmits its video and/or audio information to its subscribers in a modulated format. Accordingly, this modulated digital signal must be demodulated upon receipt by the set top box and prior to decompression. The transceiver receives the modulated signal and passes it to the receiver format converter. The receiver format converter demodulates the modulated signal to recover the original digital video information, which is a format suitable for playback by the user. The receiver format converter receives the data file from the transceiver, and therefore when the data is being transferred between the receiver format converter and the transceiver, they are in data communication.
12. A communication system as recited in claim 1, wherein said reception system further comprises: an output data converter in data communication with said digital decompressor.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), the output data converter in data communication with the digital decompressor exists. The video and/or audio data output from the digital decompressor is in a digital format and must be converted to a format that a television can accept, such as NTSC. The set top boxes provided by DIRECTV to its subscribers include an output data converter (NTSC encoder). When data is being transferred between the digital decompressor and the output data converter, they are in data communication.
13. A communication system as recited in claim 1, wherein said storage device stores at least a portion of a data file.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a storage device which stores at least a portion of a data file exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a hard disk used to store video and/or audio programs, or store portions of a program (e.g., a portion of a data file) received from the transmission system.
14. A communication system as recited in claim 13, wherein said storage device is a temporary storage device.	In instrumentality nos. 1(a), 1(b), 1(c), 2(a), 2(b), 2(c), 3(a), and 3(b), a temporary storage device exists. The set top boxes with or without a DVR provided by DIRECTV to its subscribers have a temporary storage device (e.g., buffer) which store, only temporarily, portions of the video and/or audio data file received from the transmission system.
15. A communication system as recited in claim 1, wherein said storage device stores an entire data file.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a storage device which stores an entire data file exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a hard disk used to store one or more video and/or audio programs (e.g., entire data files) received from the transmission system.
16. A communication system as recited in claim 15, wherein said storage device is a temporary storage device.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c) and 3(b), a temporary storage device exists which stores entire data files. The set top boxes with DVR provided by DIRECTV to its subscribers have a storage device which stores, only temporarily (e.g., for a number of days), an entire video and/or audio data file received from the

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	transmission system.
17. A communication system comprising: a transmission system at a first location in data communication with a reception system at a second location, wherein said transmission system comprises	Acacia accuses DIRECTV of infringing claim 17 of the '702 patent with its instrumentality nos. 1(b), 2(b), and 3(b). In each of these instrumentalities, DIRECTV receives digital video and/or audio information from a content provider/content aggregator, such as STARZ, who is acting on DIRECTV's behalf. In instrumentality 2(b) and sometimes 3(b), DIRECTV receives this video and/or audio information and stores it on its own video server, a compressed data library. In instrumentality 1(b), and sometimes 3(b), the digital video and/or audio information is transmitted to its subscribers without having been stored at DIRECTV's uplink facilities. The content provider/content aggregator's system(s) and/or DIRECTV's uplink facilities(s) comprise a transmission system. The digital video and/or audio information is transmitted to the homes of DIRECTV subscribers who have set top boxes provided to them by DIRECTV. Each set top box is a reception system at a second location (e.g. at a location that is different than the location(s) of the transmission system). Video information is transferred from the transmission system to the reception system and therefore when the data is being transferred between the transmission system and the reception system, they are in data communication.
a source material library,	In instrumentality nos. 1(b), 2(b), and 3(b), a source material library exists. Prerecorded source audio and/or video material is stored as a collection of data files (or portions of data files) prior to compression. Each video and/or audio item is stored on at least one exemplary storage medium, including, but not limited to, film, digital tape, analog or digital videotape, CD, DVD, or hard disk.
an identification encoder in data communication with said source material library,	In instrumentality nos. 1(b), 2(b), and 3(b), an identification encoder exists. Items of digital video and/or audio information are assigned a unique identification code. A structure, such as software, assigns the unique identification code. The unique identification code may be used to identify and locate the item of information within the compressed data library. The identification encoder receives information from the source material library, and therefore when the information is being transferred between the identification encoder and the source material library, they are in data communication.
a converter having a data input in data communication with said source material library and a digital data output,	In instrumentality nos. 1(b), 2(b), and 3(b), a converter having a data input in data communication with the source material library and a digital data output exists. Video information is converted by the converter into a specific predetermined format for video, such as "Y, Cr, Cb."

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	The converter has a data input wherein the video and/or audio information from the item which was stored in the source material library is passed from the source material library to the converter, and therefore when data is transferred between the source material library and the data input of the converter, they are in data communication. The converter has a digital data output for outputting the video information in the proper format.
a sequence encoder in data communication with said digital data output,	In instrumentality nos. 1(b), 2(b), and 3(b), a sequence encoder exists. MPEG-2 encoders utilize a time encoder and Acacia believes that DIRECTV utilizes the MPEG-2 format. For example, in the ISO/IEC 13818-1:2000(E) (MPEG System Specification) at page 116, "There is a single, common system clock in the MPEG-2 encoder, and this clock is used to create timestamps that indicate the correct presentation and decoding timing of audio and video, as well as to create timestamps that indicate the instantaneous values of the system clock itself at sampled intervals. The timestamps that indicate the presentation time of audio and video are called Presentation Time Stamps (PTS). Those that indicate the decoding time are called Decoding Timestamps (DTS), and those that indicate the value of the system clock are called the System Clock Reference (SCR) in Program Streams and the Program Clock Reference (PCR) in Transport Streams. It is the presence of this common system clock in the encoder, the timestamps that are created from it, and the recreation of the clock in the decoder and the correct use of the timestamps that provide the facility to synchronize properly the operation of the decoder." Further, the MPEG-2 (ISO/IEC 13818-1:1996(E)) video systems specification indicates on page 49 that the formatted data is formed into data blocks such that a Group of Pictures (GOP) header is created. This header also contains a timestamp. Data blocks having the assigned timestamps are in a sequence of addressable data blocks. The same standards as described above for MPEG-2 are understood by Acacia to apply to MPEG-4 as well. The presence of these timestamps indicates that a sequence encoder must have been used during MPEG-2 encoding within the MPEG-2 encoder to assign the timestamps to the data blocks and thereby create a sequence of addressable data blocks. The input to the sequence encoder is the data from the digital output of the converter, and therefore when the data is being transferred between the digital output of the converter and the sequence encoder, they are in data communication..
a digital data compressor in data communication with said digital data output,	In instrumentality nos. 1(b), 2(b), and 3(b), a digital data compressor in data communication with the digital data output exists. MPEG-2 encoders compress digital video. (See, MPEG-2 specification).

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	The MPEG-2 encoder receives digital data from the digital data output of the converter which has been time encoded. When the data is transferred between the digital data output of the converter and the compressor, they are in data communication.
a compressed data formatting device in data communication with said digital data compressor,	In instrumentality nos. 1(b), 2(b), and 3(b), a compressed data formatting device in data communication with the digital data compressor exists. Compressed data must be formatted in the particular file format by a compressed data formatting device running on hardware that formats the input data to the file format, such as MPEG-2 or other format. Audio and video data are compressed separately. Accordingly, following compression, the compressed audio and video data are combined into a single file. The software and hardware that performs the combination of the audio and video is the compressed data formatting device. The compressed data formatting device creates and formats the file comprising the compressed data, and therefore when the compressed data is being transferred between the digital data compressor and the compressed data formatting device, they are in data communication.
a compressed data library in data communication with said compressed data formatting device, and	In instrumentality nos. 1(b), 2(b), and 3(b), a compressed data library in data communication with the compressed data formatting device exists. In instrumentality 1(b), 2(b), and sometimes 3(b), a video server for storing prerecorded, compressed, digital video and/or audio information resides at the content provider/content aggregator such as HBO or STARZ. (See, "STARZ Encore Productivity and Air Operation," broadcastengineering.com and "STARZ Encore Group," broadcastengineering.com). In instrumentality nos. 2(b) and 3(b), DIRECTV uplink facilities also may use video servers to store items of digital video information. DIRECTV states on its website that: "Some programs are copied to professional video servers by the broadcast centers' state-of-the-art automation equipment to be broadcast later." (http://www.directv.com/DTVAPP/learn/DTVTechnology.jsp). It is known that DIRECTV utilizes MediaStream 1600 servers at its uplink facilities (skyreport.com, 4/20/99). The compressed data formatting device formats the data to be placed in a file for storage in the compressed data library and therefore when the data is transferred between the compressed data formatting device and the compressed data library, they are in data communication...
a transmitter in data communication with said compressed data library; and	In instrumentalities nos. 1(b), 2(b), and 3(b), a transmitter in data communication with the compressed data library exists. The content provider/content aggregator transmits digital files to DIRECTV's uplink facilities using a transmitter, via one of a number of possible communication channels. DIRECTV also transmits the digital file to the subscribers' transceiver from uplink facilities(s) via a satellite television communications channel. Both transmitters receive its information from the compressed data library and therefore when the data is being transferred between the transmitter and the compressed data

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	library, they are in data communication.
wherein said reception system comprises a transceiver in data communication with said transmission system,	In instrumentality nos. 1(b), 2(b), and 3(b), a transceiver in data communication with a transmission system exists. DIRECTV provides its subscribers with set top boxes, some of which include a digital video recorder (DVR). The set top box receives video and/or audio information transmitted from the transmission system via a satellite television communication channel and is therefore in data communication with the transmission system. The set top box is also capable of transmitting, for example, pay per view (PPV) selections to the billing portion of the transmission system. Therefore, when the receiver of the set top box receives video from the transmission system or when the transmitter of the set top box sends PPV selections to the transmission system, data is being transferred between the set top box and the transmission system meaning that they are in data communication.
a receiver format converter in data communication with said transceiver,	In instrumentality nos. 1(b), 2(b), and 3(b), a receiver format converter in data communication with the transceiver exists. In order to transmit a digital video and/or audio signal to a subscriber set top box, the digital video and/or audio signal must be modulated (e.g., QPSK, QAM,8-VSB, etc.) DIRECTV transmits its video and/or audio information to its subscribers in a modulated format. Accordingly, this modulated digital video and/or audio signal must be demodulated upon receipt by the set top box and prior to decompression. The transceiver receives the modulated signal and passes it to the receiver format converter. The receiver format converter demodulates the modulated video and/or audio signal to recover the original digital video and/or audio information. The receiver format converter receives the data file from the transceiver, and therefore when the data is being transferred between the receiver format converter and the transceiver, they are in data communication.
a storage device in data communication with said receiver format converter,	In instrumentality nos. 1(b), 2(b), and 3(b), a storage device in data communication with the transceiver exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a RAM and a hard disk used to store video and/or audio programs received from the transmission system. These storage devices receive the programs from the transceiver, and therefore when data is being transferred between the transceiver and the storage device, they are in data communication.
user playback controls in data communication with said storage device,	In instrumentality nos. 1(b), 2(b), and 3(b), user playback controls in data communication with the storage device exists. The set top boxes with DVR provided by DIRECTV to its subscribers allow the user to play back the stored video and/or audio using playback controls, such as stop, rewind, pause, and fast forward. The playback controls communicate information to the storage device either directly of through the decompressor and therefore when data is being transferred between the playback controls and the storage device, they are in data communication.
a digital decompressor in data	In instrumentality nos. 1(b), 2(b), and 3(b), a digital decompressor in data

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communication with said receiver format converter, and	communication with the receiver format converter. The set top boxes with DVR provided by DIRECTV to its subscribers have a decompressor which decompresses MPEG-2 information. The digital decompressor operates on the video and/or audio information it receives from the DVR hard disk and therefore when the data is being transferred between the digital decompressor and the hard disk, they are in data communication.
an output data converter in data communication with said digital decompressor.	In instrumentality nos. 1(b), 2(b), and 3(b), the output data converter in data communication with the digital decompressor exists. The video and/or audio data output from the digital decompressor is in a digital format and must be converted to a format that a television can accept, such as NTSC. The set top boxes provided by DIRECTV to its subscribers include an output data converter (NTSC encoder). When data is being transferred between the digital decompressor and the output data converter, they are in data communication.
18. A communication system as recited in claim 17, wherein said digital data compressor is in data communication with said sequence encoder.	In instrumentality nos. 1(b), 2(b), and 3(b), the digital data compressor is in data communication with the sequence encoder. Data from the sequence encoder is passed to the digital data compressor and therefore, when the data is being transferred between the data compressor and the sequence encoder, they are in data communication.
19. A communication system as recited in claim 17, wherein said compressed data formatting device is in data communication with said identification encoder.	In instrumentality nos. 1(b), 2(b), and 3(b), the compressed data formatting device is in data communication with the identification encoder. The compressed data formatting device creates and formats the file. The file is accompanied by its unique identification code. Therefore, when the unique identification code is passed from the identification encoder to the compressed data formatting device, the compressed data formatting device is in data communication with the identification encoder.
22. A communication system as recited in claim 17, wherein said storage device stores at least a portion of a data file.	In instrumentality nos. 1(b), 2(b), and 3(b), a storage device which stores at least a portion of a data file exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a hard disk used to store video and/or audio programs, or store portions of a program (e.g., a portion of a data file) received from the transmission system.
23. A communication system as recited in claim 17, wherein said storage device stores an entire data file.	In instrumentality nos. 1(b), 2(b), and 3(b), a storage device which stores an entire data file exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a hard disk used to store one or more video and/or audio programs e.g., entire data files) received from the transmission system.
26. A communication system as recited in claim 17, wherein said output data converter is in data communication with said storage device.	In instrumentality nos. 1(b), 2(b), and 3(b), the output data converter is in data communication with the storage device. The output data converter (e.g., NTSC encoder) receives data which was stored on the storage device and therefore when the data is being

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	transferred between the storage device and the output data converter, they are in data communication.
27. A communication system comprising: a transmission system at a first location in data communication with a reception system at a second location, wherein said transmission system comprises:	Acacia accuses DIRECTV of infringing claim 27 of the '702 patent with its instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b). In each of these instrumentalities, DIRECTV receives digital video and/or audio information from a content provider/content aggregator, such as HBO or STARZ, who is acting on DIRECTV's behalf. In instrumentality 2(b), 2(c) and sometimes 3(b), DIRECTV receives this video and/or audio information and stores it on its own video server, a compressed data library. In instrumentality 1(b), 1(c), and sometimes 3(b), the digital video information is transmitted to its subscribers without having been stored at DIRECTV's uplink facilities. The content provider/content aggregator's system(s) and/or DIRECTV's uplink facilities(s) comprise a transmission system. The digital video and/or audio information is transmitted to the homes of DIRECTV subscribers who have set top boxes provided to them by DIRECTV. Each set top box is a reception system at a second location (e.g. at a location that is different than the location(s) of the transmission system). Video information is transferred from the transmission system to the reception system and therefore when the data is being transferred between the transmission system and the reception system, they are in data communication.
an identification encoder, wherein said identification encoder allows entry of a popularity code; and	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), an identification encoder which allows entry of a popularity code exists. Items of digital video and/or audio information are assigned a unique identification code. A structure, such as software, assigns the unique identification code. The unique identification code may be used to identify and locate the item of information within the compressed data library. The identification encoder receives information from the source material library, and therefore when the information is being transferred between the identification encoder and the source material library, they are in data communication. In a pay-per-view system or a digital ad insertion system, the identification encoder also allows the entry of a popularity code. This popularity code relates to the anticipated or actual number of requests for any particular item stored on the video server. Using the popularity code the server may, for instance, allocate appropriate resources for the popularity of each item.
a compressed data library in data communication with said identification encoder; and	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a compressed data library in data communication with the identification encoder exists. In instrumentalities 1(b), 1(c), 2(b), 2(c), and sometimes 3(b), a video server for storing compressed, digital video and/or audio information resides at the content provider/content aggregator such as HBO or

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	STARZ. (See, "STARZ Encore Productivity and Air Operation," broadcastengineering.com and "STARZ Encore Group," broadcastengineering.com). In instrumentality no. 2(b), 2(c), and 3(b), DIRECTV uplink facilities also may use video servers to store items of digital video information accompanied by assigned unique identification codes. DIRECTV states on its website that: "Some programs are copied to professional video servers by the broadcast centers' state-of-the-art automation equipment to be broadcast later." (http://www.directv.com/DTVAPP/learn/DTVTechnology.jsp). It is known that DIRECTV utilizes MediaStream 1600 servers at its uplink facilities (skyreport.com, 4/20/99). The video files are stored in the compressed data library accompanied by a unique identification code and therefore, when the data is being transferred between the compressed data library and the identification encoder, they are in data communication.
wherein said reception system comprises: a transceiver in data communication with said transmission system,	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a transceiver in data communication with the transmission system exists. DIRECTV provides its subscribers with set top boxes, some of which include a digital video recorder (DVR). The set top box receives video and/or audio information transmitted from the transmission system via a satellite television communication channel and is therefore in data communication with the transmission system. The set top box is also capable of transmitting, for example, pay per view (PPV) selections to the billing portion of the transmission system. Therefore, when the receiver of the set top box receives video from the transmission system or when the transmitter of the set top box sends PPV selections to the transmission system, data is being transferred between the set top box and the transmission system meaning that they are in data communication.
a storage device in data communication with said transceiver,	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a storage device in data communication with the transceiver exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a RAM and a hard disk used to store video and/or audio programs received from the transmission system. These storage devices receive the programs from the transceiver, and therefore when data is being transferred between the transceiver and the storage device, they are in data communication.
user playback controls in data communication with said storage device,	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), user playback controls in data communication with the storage device exist. The set top boxes with DVR provided by DIRECTV to its subscribers allow the user to play back the stored video and/or audio using playback controls, such as stop, rewind, pause, and fast forward. The playback controls communicate information to the storage device either directly of through the decompressor and therefore when data is being transferred between the playback controls and the storage device, they are in data communication.

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a digital decompressor in data communication with said storage device, and	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a digital decompressor in data communication with the storage device exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a decompressor which decompresses MPEG-2 information. The digital decompressor operates on the video and/or audio information it receives from the DVR hard disk and therefore when the data is being transferred between the digital decompressor and the hard disk, they are in data communication.
a playback device in data communication with said digital decompressor.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a playback device in data communication with the digital decompressor exists. The set top boxes with DVR provided by DIRECTV to its subscribers output video and/or audio information to a television set (playback device) for viewing. The television receives data from the decompressor and therefore when data is being transferred between the decompressor and the television, they are in data communication.
28. A communication system as recited in claim 27, wherein said transmission system further comprises: a source material library storing a portion of at least one data file.	In instrumentality nos. 1(b), 2(b) and 3(b), a source material library exists. Prerecorded source audio and/or video material is stored as a collection of data files (or portions of data files) prior to compression. Each video and/or audio item is stored on at least one exemplary storage medium, including, but not limited to, film, digital tape, analog or digital videotape, CD, DVD, or hard disk.
29. A communication system as recited in claim 28, wherein said transmission system further comprises: a converter having a data input in data communication with said source material library and a digital data output.	In instrumentality nos. 1(b), 2(b) and 3(b), a converter having a data input in data communication with the source material library and a digital data output exists. The converter has a data input wherein the video and/or audio information from the item which was stored in the source material library is passed from the source material library to the converter, and therefore when data is transferred between the source material library and the data input of the converter, they are in data communication. The converter has a digital data output for outputting the video and/or audio information in the proper format.
30. A communication system as recited in claim 29, wherein said transmission system further comprises: a data compressor in data communication with said digital data output of said converter.	In instrumentality nos. 1(b), 2(b), and 3(b), a digital data compressor in data communication with the digital data output exists. MPEG-2 encoders compress digital video and/or audio (See, MPEG-2 specification). The MPEG-2 encoder receives digital data from the digital data output of the converter which has been time encoded by the sequence encoder. When the data is transferred between the digital data output of the converter and the compressor, they are in data communication.
31. A communication system as recited in claim 27, wherein said transmission system further comprises: a compressed data formatting device	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a compressed data formatting device in data communication with the identification encoder exists. Compressed data must be formatted in the particular file format by a

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in data communication with said identification encoder.	compressed data formatting device running on hardware that formats the input data to the file format, such as MPEG-2 or other format. Audio and video data are compressed separately. Accordingly, following compression, the compressed audio and video data are combined into a single file. The software and hardware that performs the combination of the audio and video is the compressed data formatting device. The compressed data formatting device creates and formats the file having an accompanying unique identification code assigned by the identification encoder, and therefore when the unique identification code is being transferred between the identification encoder and the compressed data formatting device, they are in data communication.
32. A communication system as recited in claim 27, wherein said transmission system further comprises a sequence encoder.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a sequence encoder exists. MPEG-2 encoders utilize a time encoder and Acacia believes that DIRECTV utilizes the MPEG-2 format. For example, in the ISO/IEC 13818-1:2000(E) (MPEG System Specification) at page 116, "There is a single, common system clock in the MPEG-2 encoder, and this clock is used to create timestamps that indicate the correct presentation and decoding timing of audio and video, as well as to create timestamps that indicate the instantaneous values of the system clock itself at sampled intervals. The timestamps that indicate the presentation time of audio and video are called Presentation Time Stamps (PTS). Those that indicate the decoding time are called Decoding Timestamps (DTS), and those that indicate the value of the system clock are called the System Clock Reference (SCR) in Program Streams and the Program Clock Reference (PCR) in Transport Streams. It is the presence of this common system clock in the encoder, the timestamps that are created from it, and the recreation of the clock in the decoder and the correct use of the timestamps that provide the facility to synchronize properly the operation of the decoder." Further, the MPEG-2 (ISO/IEC 13818-1:1996(E)) video systems specification indicates on page 49 that the formatted data is formed into data blocks such that a Group of Pictures (GOP) header is created. This header also contains a timestamp. Data blocks having the assigned timestamps are in a sequence of addressable data blocks. The same standards as described above for MPEG-2 are understood by Acacia to apply to MPEG-4 as well. The presence of these timestamps indicates that a sequence encoder must have been used during MPEG-2 encoding within the MPEG-2 encoder to assign the timestamps to the data blocks and thereby create a sequence of addressable data blocks.
33. A communication system as recited in claim 32, wherein said sequence encoder transforms digital data blocks into a group of addressable data blocks.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a sequence encoder which transforms digital data blocks into a group of addressable data blocks exists. See, discussion regarding "sequence encoder" above. The time encode included with the MPEG-2 encoder, described above, transforms digital data blocks into a group of addressable data blocks.

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34. A communication system as recited in claim 27, wherein said transmission system further comprises: a transmitter in data communication with said compressed data library, wherein said transmitter sends at least a portion of a compressed data file to said reception system.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a transmitter in data communication with the compressed data library exists. DIRECTV transmits the compressed video and/or audio data file (or a portion of the file) to the subscribers' reception system from uplink facilities(s) via a satellite television communications channel. This transmitter receives its information from the compressed data library and therefore when the data is being transferred between the transmitter and the compressed data library, they are in data communication.
37. A communication system as recited in claim 27, wherein said reception system further comprises: a receiver format converter in data communication with said transceiver, wherein said receiver format [sic -- converter] converts at least a portion of a data file into a format suitable for playback by a user.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a receiver format converter in data communication with the transceiver exists. In order to transmit a digital video and/or audio signal to a subscriber set top box, the digital video and/or audio signal must be modulated (e.g., QPSK, QAM,8-VSB, etc.) DIRECTV transmits its video and/or audio information to its subscribers in a modulated format. Accordingly, this modulated digital signal must be demodulated upon receipt by the set top box and prior to decompression. The transceiver receives the modulated signal and passes it to the receiver format converter. The receiver format converter demodulates the modulated signal to recover the original digital video information, which is a format suitable for playback by the user. The receiver format converter receives the data file from the transceiver, and therefore when the data is being transferred between the receiver format converter and the transceiver, they are in data communication.
38. A communication system as recited in claim 27, wherein said reception system further comprises: an output data converter in data communication with said digital decompressor.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), the output data converter in data communication with the digital decompressor exists. The data output from the digital decompressor is in a digital format and must be converted to a format that a television can accept, such as NTSC. The set top boxes provided by DIRECTV to its subscribers include an output data converter (NTSC encoder). When data is being transferred between the digital decompressor and the output data converter, they are in data communication.
39. A communication system as recited in claim 27, wherein said. storage device stores at least a portion of a data file	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a storage device which stores at least a portion of a data file exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a hard disk used to store programs, or store portions of a program (e.g., a portion of a data file) received from the transmission system.
40. A communication system as recited in claim 27, wherein said storage device stores an entire data file.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a storage device which stores an entire data file exists. The set top boxes with DVR provided by DIRECTV to its subscribers have a hard disk used to store one or more video and/or audio programs (e.g., entire data files) received from the transmission system.
41. A communication system as recited in claim 39, wherein said storage device is a temporary storage device.	In instrumentality nos. 1(a), 1(b), 1(c), 2(a), 2(b), 2(c), 3(a), and 3(b), a temporary storage device exists. The set top boxes with or without a DVR provided by DIRECTV to its subscribers have a temporary storage device (e.g., buffer) which store,

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	only temporarily, portions of the video and/or audio data file received from the transmission system.
42. A communication system as recited in claim 40, wherein said storage device is a temporary storage device.	In instrumentality nos. 1(b), 1(c), 2(b), 2(c), and 3(b), a temporary storage device exists which stores entire data files. The set top boxes with DVR provided by DIRECTV to its subscribers have a storage device which stores, only temporarily (e.g., for a number of days), an entire video and/or audio data file received from the transmission system.

IV. WHETHER EACH ASSERTED CLAIM IS CLAIMED TO BE LITERALLY PRESENT OR PRESENT UNDER THE DOCTRINE OF EQUIVALENTS IN THE ACCUSED INSTRUMENTALITY (PATENT L.R. 3-1(D))

Acacia contends that each element of each asserted claim is claimed to be literally present in the Accused Instrumentality. Acacia, however, reserves the right to contend that any element of any of the asserted claims is present under the doctrine of equivalents as facts come to light during discovery or following the Court's claim construction ruling.

V. THE PRIORITY DATE TO WHICH EACH ASSERTED CLAIM IS ENTITLED (PATENT L.R. 3-1(E))

The '702 patent claims priority from the '992 patent. Accordingly, the priority date for each of the asserted claims from the '992 patent and the '702 patent is January 7, 1991.

VI. WHETHER ACACIA WISHES TO RELY ON THE ASSERTION THAT ITS OWN SYSTEM OR METHOD PRACTICES THE CLAIMED INVENTION (PATENT L.R. 3-1(F))

Acacia does not have its own apparatus, product, device, process, method, act, or other instrumentality which it wishes to assert practices the claimed invention. Acacia therefore does not wish to preserve the right to rely, for any purpose, on the assertion that its own apparatus, product, device, process, method, act, or other instrumentality practices the claimed invention.

DATED: June 29, 2005

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